



2014 Annual Drinking Water Quality Report

City of Hickory, Alexander County, Southeastern Catawba County and Town of Catawba

Public Water System ID: 01-18-010, 01-02-020, 20-18-004, 01-18-040

The City of Hickory is pleased to present you this 2014 edition of the Annual Drinking Water Quality Report. Through proper treatment and system operation, we ensure that the water you receive meets all State and Federal drinking water standards and in many cases, Hickory's operations go beyond what is required to ensure our water is of the highest quality. We are pleased to inform you that our system has no violations during the reporting period. Publication of this report is required by the "Safe Drinking Water Act" under General Statute: 42 U.S.C. § 300f-300j-26 and reflects the continued hard work and dedication of the City of Hickory Public Utilities employees who ensure your water is safe, reliable and of superior quality. **If you have any questions about this report or concerning your water, please contact Kevin B. Greer, PE, Assistant Public Services Director, at (828) 323- 7427 or Rick Stine, Water Treatment Plant Superintendent, at (828) 323-7530.**

What EPA Wants You to Know

Our water source is surface water from Lake Hickory, which is part of the Catawba River. Due to the proximity of Lake Hickory/ Catawba River to major roads such as US Hwy 321 and NC Hwy 127 and the potential for contamination due to vehicles, road run-off and development, Lake Hickory/Catawba River has a susceptibility rating of "higher". This does not mean Lake Hickory/ Catawba River has poor water quality. It simply means that potential for contamination is higher than other water bodies that do not have these influences. As water travels over land or underground it can pick up substances or contaminants (natural or manmade) such as microbes, inorganic or organic chemicals and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. The City of Hickory regularly monitors flow contaminants in our drinking water according to federal and state laws. Tables on the following pages of this report reveal the actual test results of our monitoring from the period of January 1, 2014 through December 31, 2014. Additional information about contaminants and potential health effects can be obtained by contacting the Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791.

The relative susceptibility rating of each source for City Of Hickory water was determined by combining the contaminant rating (number and location of PCS's within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating	SWAP Report Date
Lake Hickory	Higher	June 2014

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City Of Hickory is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

2014 Annual Water Quality Report

City of Hickory

Public Water System ID: 01-18-010

Water Quality Data

Microbiological Contaminates 2014:

None were detected in the system.

Radiological Contaminates 2014:

None were detected in source water.

Water Quality Data Tables of Detected Contaminant

Turbidity

Contaminant (units)	Treatment Technique or Violation Y/N	Drinking Water	Treatment Technique (TT) Violation if:	Likely Source of Contamination
Turbidity (NTU) -Highest single turbidity measurement	N	0.097 NTU	Turbidity > 1 NTU	Soil runoff
Turbidity (NTU) -Lowest monthly percentage (%) of samples meeting turbidity limits	N	100%	Less than 95% of monthly turbidity measurements are \leq 0.3 NTU	

- Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Drinking Water	Range Low - High	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm)	1/09/14	N	0.349 mg/L	N/A	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Nitrate/Nitrite Contaminants

Contaminant (units)	MCL Violation Y/N	Drinking Water	Range Low-High	MCLG	MCL	Likely Source of Contamination
Nitrate (as Nitrogen) (ppm)	N	ND	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	N	0.10 mg/L	N/A	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

City of Hickory (cont.)

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Drinking Water	# of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	7/30/13	0.359	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	7/30/13	<3.0	0	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Total Organic Carbon (TOC)

Contaminant (units)	TT Violation Y/N	Drinking Water (RAA Removal Ratio)	Range Monthly Removal % Low - High	MCLG	TT	Likely Source of Contamination	Compliance Method (Step 1 or ACC#)
Total Organic Carbon (removal ratio) TOC-TREATED	N	0.99	0 - 100	N/A	TT	Naturally present in the environment	ACC #2

Disinfectants and Disinfection Byproducts Contaminants

Contaminant (units)	MCL/MRDL Violation Y/N	Drinking Water RAA (Stage 2)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppm) [Total Trihalomethanes]	N	0.05	0.03 - 0.07	N/A	0.08	By-product of drinking water chlorination
HAA5 (ppm) [Total Haloacetic Acids]	N	0.03	0.02 - 0.05	N/A	0.06	By-product of drinking water disinfection
Chlorine (ppm)	N	1.56	0.86 - 1.7	4	4	Water additive used to control microbes

For TTHM: some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

For HAA5: Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

The PWS Section requires monitoring for other misc. contaminants, some for which the EPA has set national secondary drinking water standards (SMCLs) because they may cause cosmetic effects or aesthetic effects (such as taste, odor, and/or color) in drinking water. The contaminants with SMCLs normally do not have any health effects and normally do not affect the safety of your water.

City of Hickory (cont.)**Other Miscellaneous Water Characteristics Contaminants**

Contaminant (units)	Sample Date	Drinking Water	Range High and Low	SMCL
Sodium (mg/L)	1/09/2014	12.8	N/A	N/A
Sulfate (mg/L)	1/09/2014	ND	N/A	250 mg/L
pH (SU)	1/09/2014	6.9	N/A	6.5 to 8.5
Alkalinity (mg/L CaCO ₃)	1/09/2014	15	N/A	N/A
Hardness (mg/L CaCO ₃)	1/09/2014	16.3	N/A	N/A
Iron (mg/L)	1/09/2014	ND	N/A	0.300

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Alexander County
Public Water System ID: 01-02-020

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Drinking Water	# of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	Aug 2013	0.247	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	Aug 2013	<3.0	0	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Disinfectants and Disinfection Byproducts Contaminants

Contaminant (units)	MCL/MRDL Violation Y/N	Drinking Water RAA (Stage 2)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppm) [Total Trihalomethanes]	N	0.05	0.03 - 0.06	N/A	0.08	By-product of drinking water chlorination
HAA5 (ppm) [Total Haloacetic Acids]	N	0.03	0.03 - 0.04	N/A	0.06	By-product of drinking water disinfection

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Southeastern Catawba County
Public Water System ID: 20-18-004

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Drinking Water	# of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	July 2014	<0.050	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	July 2014	<3.0	0	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Disinfectants and Disinfection Byproducts Contaminants

Contaminant (units)	MCL/MRDL Violation Y/N	Drinking Water RAA (Stage 2)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppm) [Total Trihalomethanes]	N	0.06	0.05 - 0.06	N/A	0.08	By-product of drinking water chlorination
HAA5 (ppm) [Total Haloacetic Acids]	N	0.04	0.03 - 0.04	N/A	0.06	By-product of drinking water disinfection

2014 Annual Drinking Water Quality Report
Town of Catawba
Public Water System ID: 01-18-040

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Drinking Water	# of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	Aug 2013	0.062	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	Aug 2013	<3.0	0	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Disinfectants and Disinfection Byproducts Contaminants

Contaminant (units)	MCL/MRDL Violation Y/N	Drinking Water RAA (Stage 2)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppm) [Total Trihalomethanes]	N	0.05	0.04 - 0.06	N/A	0.08	By-product of drinking water chlorination
HAA5 (ppm) [Total Haloacetic Acids]	N	0.03	0.03 - 0.04	N/A	0.06	By-product of drinking water disinfection

Important Drinking Water Definitions:

Not-Applicable (N/A) – Information not applicable/not required for that particular water system or for that particular rule.

Non-Detects (ND) - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

Parts per million (ppm) or Milligrams per liter (mg/L) - One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (ug/L) - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/L) - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/L) - One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) - Picocuries per liter is a measure of the radioactivity in water.

Million Fibers per Liter (MFL) - Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Maximum Residual Disinfection Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfection Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.